

CLAIMS

1. A method for operating a cooling and heating circuit of a motor vehicle driven by an internal combustion engine, the method comprising the steps providing a first cooling medium path through a bypass conduit; providing a second cooling medium path through a main cooler of the internal combustion engine; providing a third cooling medium through a heating heat exchanger; providing a fourth cooling medium path through a heat accumulator; subdividing cooling medium flows through said paths by an electrically operated valves; providing the cooling medium flows by at least one pump; controlling said valves by a control unit in dependence on operational and environmental parameters as well as nominal values; arranging a third control valve which is controlled by said control unit in said fourth cooling medium path and closing the third control valve completely or partially when a reference temperature of a remaining cooling and heating circuit exceeds a nominal value provided in said control unit, and opening said third control valve when the reference temperature is below the nominal value.

2. A method as defined in claim 1; and further selecting a nominal value for closing of the third control valve to be greater than a nominal value for the opening of the third control valve.

3. A method as defined in claim 1; and further comprising providing a temperature sensor in the heat accumulator; and opening the third control valve when a temperature of the heat accumulator is greater than a reference temperature and the reference temperature is smaller than a nominal value of the reference temperature, or the reference temperature is greater/equal to the nominal value of the reference temperature and the temperature in the heat accumulator is smaller than the nominal value of the reference temperature; and closing the third control valve when the temperature in the heat accumulator is smaller/equal to the reference temperature or the reference temperature is greater/equal to the nominal value of the reference temperature and the reference temperature is smaller than the nominal value of the reference temperature or the temperature in the heat accumulator is greater/equal to the nominal value of the reference temperature.

4. A method as defined in claim 1; and further comprising providing a hysteresis between the opening and the closing of the third control valve.

5. A method as defined in claim 1; and further comprising measuring the temperature of the heat accumulator directly by a temperature sensor.

6. A method as defined in claim 1; and further comprising using as the control unit a control device of the internal combustion engine.